

## REMARKS

The Examiner is thanked for the thorough examination of the present application and the withdrawal of the previous rejections. The present Office Action, however, has continued to reject all pending claims 39-44 and 46-53 based on new grounds. Specifically, claims 39-44, 46, 47 and 50-53 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Chou et al. (US Pat. 2003/0054716) in view of Yamamoto et al. (US Pat. 4,560,737) and Asahina (US 3,607,754). Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Chou et al. (US Pat. 2003/0054716) in view of Yamamoto et al. (US Pat. 4,560,737), Asahina (US 3,607,745) and Allen (US 5,610,455).

In Applicant's previous response, the claims were distinguished over rejections based on the combination of Chou and Yamamoto. The distinctions set out by the Applicant in that prior response are incorporated by reference herein. In addition, Applicant sets for the following additional distinguishing remarks.

### **Rejections Under 35 U.S.C. 103(a) to claims 39-44, 46, 47 and 50-53**

Claims 39-44, 46, 47 and 50-53 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Chou et al. in view of Yamamoto et al. and Asahina.

In order for a claim to be properly rejected under 35 U.S.C. §103, the teachings of the prior art reference must suggest all features of the claimed invention to one of ordinary skill in the art. See, e.g., *In re Dow Chemical*, 837 F.2d 469, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 642 F.2d 413, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

Independent claim 39 recites:

39. An electret composite, comprising:  
a porous substrate; and

an electret coated on the substrate along the porous profile thereof, the electret having a first polymer ***copolymerizing from monomers having*** vinylidene fluoride (VdF) as a first monomer, hexafluoropropylene (HFP), chlorotrifluoro ethylene (CTFE), tetrafluoro ethylene (TFE), or combinations thereof as a second monomer, and a ***third monomer comprising cyclohexyl vinyl ether, 4-hydroxybutyl vinyl ether, ethyl vinyl ether, methyl methacrylate, butyl acrylate, 4-hydroxyl ethyl methacrylamide, glyceryl methacrylamide, acrolein, butyl vinyl ether, propionic vinyl ether,  $\alpha$ ,  $\alpha$ -dimethylpropionic vinyl ether, or combinations thereof.***

(*Emphasis Added*). Claim 39 patently defines over the cited art for at least the reason that the cited art fails to disclose the features emphasized above.

As expressly defined in the claim, the electret composite of claim 39 comprises an electret having a first polymer copolymerizing from monomers having a first monomer, a second monomer, and a third monomer comprising cyclohexyl vinyl ether, 4-hydroxybutyl vinyl ether, ethyl vinyl ether, methyl methacrylate, butyl acrylate, 4-hydroxyl ethyl methacrylamide, glyceryl methacrylamide, acrolein, butyl vinyl ether, propionic vinyl ether,  $\alpha$ , $\alpha$ -dimethylpropionic vinyl ether, or combinations thereof.

In page 8, however, the Office Action asserts that Applicant's previous argument, which stated that Asahina fails to teach vinylidene fluoride (VdF) and the methyl methacrylate resin are copolymerized, was not persuasive. Instead, the Office Action alleges that Asahina:

discloses an electret comprising a resin mixture of vinylidene fluoride resin and methyl methacrylate (abstract) wherein the **resin mixture is polymerized** (see claim 1). The fact that the mixture containing vinylidene fluoride and methyl methacrylate is polymerized reads on "vinylidene fluoride resin and the methyl methacrylate resin are copolymerized".

(Office Action, p. 8, lines 10-14). Applicant respectfully disagrees with this position for the following reasons.

It is clear that the Examiner believes that Asahina discloses that the mixture containing vinylidene fluoride (VdF) and the methyl methacrylate is polymerized and that this reads on the claimed feature of “the mixture containing vinylidene fluoride and the methyl methacrylate is copolymerized.” However, this interpretation of Asahina is mistaken. First, the Examiner indicates that Asahina (in claim 1) teaches that the resin mixture containing vinylidene fluoride (VdF) and the methyl methacrylate is **polymerized**. In fact, claim 1 of Asahina states:

1. An electret comprising a resin mixture of from 50 to 90% by weight of a vinylidene fluoride resin and from 10 to 50% by weight of a methyl methacrylate resin, said resin mixture having been subjected to polarization.

As can be readily verified, claim 1 of Asahina indeed teaches a resin mixture containing vinylidene fluoride (VdF) and the methyl methacrylate, with the resin mixture being subjected to **polarization**. Applicant notes, however, that that “**polarization**” is **NOT the same thing as “polymerization.”** In this regard, Asahina teaches “polarization,” while claim 39 of the present application defines a “polymerization.” The two are distinct, and for at least this reason it can be seen that the rejection is misplaced.

In addition, col. 2, lines 18-22 of Asahina teaches that vinylidene fluoride (VdF) may include, besides polyvinylidene fluoride, copolymers containing more than 70% polyvinylidene fluoride and a monomer copolymerizable with vinylidene fluoride, such as vinyl fluoride, ethylene trifluoride, ethylene tetrafluoride, and the like. Col. 2, lines 24-31 further teaches methyl methacrylate resins polymerizable with methyl methacrylate, such as an alkyl methacrylate (e.g., ethyl methacrylate, propyl methacrylate, butyl methacrylate and octyl methacrylate), styrene,  $\alpha$ -methylstyrene, acrylonitrile and alkyl acrylate. Significantly, however, Asahina fails to teach **polymerizing vinylidene fluoride (VdF) and**

***the methyl methacrylate.*** Therefore, an electret of claim 39, having a first polymer copolymerizing from monomers having a first monomer, a second monomer, and a third monomer comprising cyclohexyl vinyl ether, 4-hydroxybutyl vinyl ether, ethyl vinyl ether, methyl methacrylate, butyl acrylate, 4-hydroxyl ethyl methacrylamide, glyceryl methacrylamide, acrolein, butyl vinyl ether, propionic vinyl ether,  $\alpha,\alpha$ -dimethylpropionic vinyl ether, or combinations thereof, is not rendered unpatentable by the combination of Yamamoto, Chou, and Asahina.

For at least these reasons, claim 39 is allowable over the cited references, and reconsideration of this rejection is hereby respectfully requested. Hence it is believed that the claim 39 is allowable over the cited references. Insofar as claims 40-44 and 46-53 depend from claim 39 respectively, these claims are also allowable at least by virtue of their dependency. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

#### **Rejections Under 35 U.S.C. 103(a) to claims 48 and 49**

Hence it is believed that the claim 39 is allowable over the cited reference. Insofar as claims 48 and 49 depend from claim 39 respectively, it is the Applicant's belief that claims 48 and 49 are also allowable at least by virtue of their dependency.

If the Examiner believes a teleconference will expedite the examination of this application, the Examiner is invited to contact the undersigned attorney at 770-933-9500.

No fee is believed to be due in connection with this submission. If, however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to deposit account 20-0778.

Respectfully submitted,

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